Humaan Siddiqui

Impact of Training and Productivity Tools on Business Performance

Case Study of National Productivity Organization

Business Administration

Master’s Thesis

30 ECTS

Term: Spring 2011
Supervisor: Lars Haglund
Acknowledgements

First of all I would like to bow down my head in front of the Almighty Allah who gave me the power, patience and courage to finish this thesis. After that I would like to thank my family who is constantly been the source of motivation and inspiration for me whatever I did in my life.

Then I would like to give very special thanks from the bottom of my heart to my supervisor Mr. Lars Haglund, the co reviewer and the examiner Miss Gunnel Kardemark. Because of their constant guidance and precious time, today I am able to finish this thesis according to the right standards and format. Without their continuous help, I would not be able to construct my thesis into the right structure. So I will never ever forget the do’s and don’t that they taught me for developing this thesis.

Lastly I would like to thank Mr Iftikhar Ali who gave me his precious time for the interview and necessary research related answers of my questions for the case study.
ABSTRACT

Today in this global era with the industrious spread and boom in every aspect of life, businesses need to inject, infect and addict them with right drugs. It can be done by transforming and converting their employees in to the right kind of giant species, whose brain and performance gives excellent results like the breakthrough machine engines. So there is a strong need to recognize and acknowledge human capital as a sole diamond key factor for fostering business performance.

Purpose of the paper is to recognize efforts and effects of NPO (National Productivity Organization) that enthusiastically headed towards launching productivity tools and training mechanism in to the business sector.

Paper elaborates the empirical investigation of the NPOs training and productivity tools that enhance the business performance. So after the business case analysis of Textile Mills, it is found that NPOs training and productivity tools help textile mills to sharpen their abilities that enhance the overall value of their business performance. Topic is The Impact of Training and Productivity tools on Business Performance. And yes training has a positive and significant effect on business performance. This can be done by using variety of techniques, and methods, so numerous gaps can be filled and thus the overall mechanism operated in such a manner than it was never done before. So any business in the whole world could move from small scale to multinational monster corporation as fire. It can be done through hard work and updating and incorporating one’s self by the latest training and modifications of human capital with the establishment of productivity tools for the benefit of all the stakeholders.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page No:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. INTRODUCTION</td>
<td>7-9</td>
</tr>
<tr>
<td>1.1- Background/ Evolution of the concept</td>
<td>7</td>
</tr>
<tr>
<td>1.2- Defining Productivity</td>
<td>7</td>
</tr>
<tr>
<td>1.3- Problem Discussion</td>
<td>8</td>
</tr>
<tr>
<td>1.4- Research Question</td>
<td>8</td>
</tr>
<tr>
<td>1.5- Purpose/Objectives of the Study</td>
<td>8</td>
</tr>
<tr>
<td>1.6- Reason that Why I choose this Topic</td>
<td>9</td>
</tr>
<tr>
<td>1.6- Overall Approach</td>
<td>9</td>
</tr>
<tr>
<td>2. METHODOLOGY</td>
<td>10-15</td>
</tr>
<tr>
<td>2.1- Reasons for Selecting Methodology</td>
<td>10-11</td>
</tr>
<tr>
<td>2.1.1. Research Approach-Qualitative Research</td>
<td>10</td>
</tr>
<tr>
<td>2.1.2. Research Purpose-Exploratory and Descriptive Research</td>
<td>10</td>
</tr>
<tr>
<td>2.1.3- Research Strategy-Case Study</td>
<td>11</td>
</tr>
<tr>
<td>2.2- How the Job is Done</td>
<td>12-15</td>
</tr>
<tr>
<td>2.2.1. Case Study of Textille Mills</td>
<td>12, 13</td>
</tr>
</tbody>
</table>
2.2.2. Data Collection Method—Primary and Secondary Data

2.2.3. Choice of Company and Respondents

2.2.4. Data Analysis

2.2.5. Validity and Reliability

3. THEORETICAL FRAMEWORK

3.1 Why a Theory is important for Research

3.2 Previous studies

3.3 Theories on Training

3.4 Theories on Productivity Tools

4. EMPIRICAL FINDINGS

4.1 Introduction—Organizational Overview

4.2 NPOs Training programs

4.3 NPOs Productivity Tools

4.4 Threshold Technologies in brief

4.5 Why is there a need of NPO in Pakistan?

4.6 NPO in other countries in the region

4.7 Competitiveness and Manpower Productivity In Pakistan

4.8 Productivity of Labor (A Pakistani Industrial Study)

5. ANALYSIS
5.1 Case Analysis of Textile Mills ..............................................................40-55

5.2 Analysis of NPOs Productivity Tools ..................................................55-58

6. DISCUSSION .........................................................................................59-61

6.1 Identification of Issues ........................................................................59,60

6.2 Impact of well planned on the job training ........................................60-61

7. CONCLUSION ......................................................................................62-66

7.1 Further Scope of the research on the training ....................................62-65

7.2 Recommendations .............................................................................65-66

REFERENCES ..........................................................................................67-76
1. INTRODUCTION:

1.1. Background / Evaluation of the Concept

The Impact of Training and Productivity tools on Business performance:

Pakistan’s Perspective

The impact of training and productivity tools is quite significant on the business performance and leaves long term positive effects that leads to business productivity (NPO 2011). By adopting various tools and techniques numerous gaps can be filled and a benchmark can be set for the businesses common practices. Within occupational groups, the effect of training on productivity is large and significant for blue-collars, but small and not significant for white Collars (Ballot et al. 2002).

Human capital is widely acknowledged as a key factor to enhance business performance at both the micro and macro level (Booth, A. 1991). Long-term international trends show that there is a strong correlation between the dynamics of business productivity and level of employment. The more productive the business economy is, more competitive it is in the foreign markets, and lower is the unemployment rate (Card, D. 1999). Therefore the more productive an enterprise is, and then the more income it can save for new investments and therefore results into creation of more employment opportunities.

1.2. Defining Productivity

“Productivity phenomenon is the optimized utilization of all the available resources, investigation into the most important resource, the cultivation of new resources, through new thinking, pioneering technology, and research and development. It merges the best use of knowledge, improvement techniques, methods, and approaches for the production and distribution of quality goods and services at low unit cost in an ethical and legal way with due regard for the total environmental applications.” (Aghion & Howitt 1998).

Or making it simple
Productivity above all is about thinking & making changes.

1.3. Problem Discussion

The question is that how best we can frame business policies to maximize the business performance. The main question of current business intellects/advisors is to answer the question of how good and effective business policies can be created that maximizes business performance and productivity (Acemoglu & Pischke 1999). In a competitive business world this has become a vital question for all business think tanks. The easiest answer to the question is to device strategies that add more value to the business productivity mechanism that addresses efficiency in private and public sector.

1.4. Research Question

What is the impact of Training and Productivity tools on Business Performance?

1.5. Purpose/ Objectives of the Study

The Purpose is to attempt a research that recognizes efforts and effects of NPO (National Productivity Organization) on industry’s platform. And NPOs trainee experts effectively taught advance and effective productivity tools and training programs to business employees, which in turn shape employees skills. So Purpose of the paper is to recognize efforts and effects of NPO (National Productivity Organization) that enthusiastically headed towards launching productivity tools and training mechanism in to the Business sector.

In sum, this thesis is interesting and important in the field of Business Administration. Because the aim is to expand my knowledge to understand the concepts of training and productivity tools for businesses that improve and sharpen their performance. So that its consequences and results helps employees to improve the structure of the entire empire of the Business World industriously.
1.6. Reason that Why I Choose this Topic

Reason that why I choose this topic is that I wanted to do something for the enrichment of the entire business empire that in turn develop and sharpen the business through its major roots. And we can only make the business stem giant as hard and big by watering and feeding its major roots. And the roots that I am talking about are its employees. And the only way that we can make them as fruitful grown trees through blending, poising, steaming and roasting those employees with the right kind of trainings- that accelerates their performance like strong power boosters.

1.7. Overall Approach

The overall approach is to analyze the mechanism of NPO (National Productivity Organization) in context of its role of training and productivity mechanism. This is done through polished tools and techniques adopted from International Corporate environment.
2. METHODOLOGY

A research methodology defines what the activity of research is, how to proceed, how to measure progress. And it is the section of the research in which the methods to be used are described. Main purpose of this section is to guide the reader that how the research has been carried out throughout the whole research. And how the research plan has been made to answer the research question. This chapter includes two main parts that includes the reasons for selecting the methodology and how the job is actually done.

2.1. Reasons for Selecting Methodology

2.1.1. Research Question-Qualitative Research

It’s a significant type of research that come under the category of educational, informational and management studies. This is qualitative research because the aim is to find that how a business performance can be improved with the help of training practices and productivity tools.

Qualitative researches are used for exploration to have an answer or explanation of confusing and puzzling results. Difference between choosing qualitative and quantitative research lay on the characteristics of the collected data, words, numbers and statistics. And qualitative research has been chosen because the gathered information is interpreted in the form of words, meaningful observations, characteristics, descriptions and interpretations (Zikmund 2000). Qualitative research approach has been chosen to elaborate the reflective and deeper understanding regarding the purpose of the study.

2.1.2. Research Purpose-Exploratory and Descriptive

According to Zikmund (2000) research purpose can be explained in three categories and those are explanatory, exploratory and descriptive. I choose exploratory and descriptive methods to carry out the research. Exploratory research is to give detail description and clarify the situations and the root of the problem. I used this because it’s needed to gain the deeper understanding of the problem. And along with that descriptive research has also been chosen to collect data that describes the situations and events. And its purpose is to find the answers of what, how, where and why questions. So the reason of choosing this approach is to answer the question that is What is the impact of training and productivity tools on business performance. And it is also
descriptive to portray that how previous trainings and productivity tools affect the business organization.

This research uses a qualitative research approach and it is interpretive. That means that it is assumed that our knowledge of reality is gained only through social constructions such as language, consciousness, shared meanings, documents, tools, and other artifacts.

Now how did I deal with it in my research is that the data that I have collected is the secondary data. And this data is in the form of texts and reports that is published by the industry leaders in the Ministry of Industry and Production Division. So it attempts to understand phenomena through the meanings that those people assign to them in their report work. And that is based on their shared meanings, consciousness, and language and tools that they used in those documents and different artifacts. And the case study of textile mills is included to demonstrate NPOs role in enhancing Business Productivity. So the work is interpretive and logical because conclusions are drawn on the basis of the discussed productivity tools and training mechanism of NPO.

Background Information is the origin of the data set and some characteristics of the research itself. The analysis presented in this thesis is based upon a data set retrieved during reoccurring studies by many scientific researchers in this area. The purpose of the studies is to develop a clear representation of the dynamics of how can we improve business performance through training and productivity tools. With the results of these studies Businesses can specifically adjust their policies.

2.1.3. Research Strategy-Case Study

Research strategy needs to be considered that which strategy is suitable for research study after the research approach and research purpose has been decided. It’s the usual map of the collection of the data on how to carry out the research or to answer the research question. There are five different research strategies to choose from that are based on the research problem. These five research strategies are experiments, histories, surveys, archival analysis and case study (yin 1994). Case study strategy has been chosen to carry out this qualitative research approach. Case study is problem centred, entrepreneurial and most suitable for practical problems. And its important strength is to use different empirical evidence.
Analysis of all the texts is being done that used as a reference in the research. How- by reading and analyzing different books and articles and making notes on the concepts that found in the way. Then after every note personal reflections has been given regarding the data. For Example I do analysis in a way is like this author said this thing about this concept. And then I gave my own opinion by reflecting upon the author’s discussion on the subject matter that weather its good or not. Or what can we get from it and how can we develop it further by adding what concept in what way. And I also gave my recommendations in the end that what’s need to be done to enhance business performance and what is the further scope of research.

2.2. How the Job is Done

2.2.1. Case Study of Textile Mills

Case study of textile mills is being used to demonstrate NPOs role in enhancing Business Performance. And it is also identified that National Productivity Organization (NPO) in Pakistan is working under the umbrella of Asian Productivity Organization (APO). NPO is working on the productivity tools and also focus on the training programs to improve business performance under the Ministry of Industries and Production Division in Pakistan. NPO conducted case study in the Textile Mills by first evaluating their current performance. And then set certain parameters have been set that how they can enhance their Business performance by adapting right training and productivity techniques.

Case of textile mills has been proven very fruitful regarding the working of NPO. Like how NPO experts analyses in detail the textile sector and identify the training needs. Other certain improvements also need to inculcate within the textile sector to improve the business mechanism. The exercise objective is mainly to minimize the Businesses cost by identifying and supporting the implementation of the best practices to enhance business productivity. Initially main causes of high costs were identified. Than against each cause, different strategies were formed to improve the mechanism and also strategies were elaborated via training of the employees within the sector that will in turn sharpen their performance. For example one cause is inconvenient work environment and housekeeping- than strategy was defined to explain how to tackle this issue. After that Benchmarking fields are identified and agreed benchmarking parameters from the fields explained in detail.
Main Scope of the case study is to find out that how the business productivity can be enhanced by adapting various productivity tools and launching effective training techniques. Then steps of the Benchmarking study were identified in which sample factories were taken into an account. After that analyses has been done by first analyzing their current practices that are mainly targeted for reform and then data and information has been collected for benchmarking. After that data/information has been analyzed to determine the best practice for the implementation of best results. Then benchmarking scores were highlighted in a table against each field across each benchmarking parameter in sample factories. Then general operational observations have been given across each benchmarking field in comparison of the taken sample factories. And certain problems and issues have also been identified for taken into consideration. At the end of the case study industrious findings are suggested to enhance the business performance and training mechanism of the sample factories that enriches the whole sector. After implementing the implementation plan expected improvements would also be given. That explains how much time it will take to increase the business productivity by enhancing the technical, operational and managerial skills of the industry.

Information was collected primarily by personally visiting to the NPO office that is located in the Capital city of Pakistan in Islamabad. Some information was taken through their reports at the moment of the visit by reviewing the information. Although overall case study has been written by interviewing their quality manager. By knowing that what procedures and instruments they have been used to conduct this study by making the notes at the time of the interview.

2.2.2. Data Collection Method- Primary and Secondary Data

After the research design and strategy has been decided then it’s time to determine the process of data collection (Zikmund, 2000). Primary data can be included by using different kind of methods. Interviews is the best suitable method because the purpose is to gain fruitful information regarding the research. And mainly an interview provides most appropriate information regarding the research topic. So the interview has been taken with the organizational representative and spokesperson Mr Iftikhar Ali who is the Senior Quality Manager at NPO. There are three ways to conduct interviews structured, semi structured and unstructured. Semi structured way has been used for the convenience of the interviewee to communicate and express
freely regarding the ideas and information that they want to talk about. It was conducted face to face for approximately one an hour.

Secondary data is the data that already collected and available in all forms is also used for evaluating research. And it is collected in two way internal and external sources. Secondary data from internal Source includes the data by looking on the materials on the reports from the NPO in case study that they conducted in the textile mills and through visiting their web page. Secondary data from External source includes the data that comes outside the organization that is included in the form of scientific articles published by different researchers. Text and Document Analysis is being used by analyzing and reading the texts that was published by different authors and different publications of the NPO in this area. And then the analysis has been given by reflecting upon the discussed productivity tools, trainings and the case study of NPO. And finally at the end conclusion and recommendations and further scope of research is described.

The general research question that posed here is that what is the impact of training and productivity tools on business performance. The thesis has been compiled by using both primary and secondary research approach. The secondary research was conducted using a variety of sources. The principal sources of information were publications of NPO, different books, articles, industry associations, case study of NPO and Internet. The data collection process has involved a detailed search and review of available literature.

2.2.3. Choice of Company and Respondent
National Productivity Organization in Pakistan has been chosen for the empirical investigation of the research problem. And Senior Quality Manager Mr Iftikhar Ali has been chosen as the choice of respondent for the interview to formulate the case study. Mr Iftikhar is the most reliable person who was responsible for the organization of that study that is conducted in the textile mills at Pakistan and also familiar with all the parameters and instruments that have been taken while conducted that study.

2.2.4. Data Analysis
Process of analysing data has been started once the necessary information have been collected (Zikmund 2000). It is very important because the aim is to identify, compare, examine and interpret various patterns and themes (Hair et al. 2007). According to Miles and Huberman
(1994) there are three different periods of data analysis procedures. First is Data Reduction in which the transformation and simplification of data needs to be made to make it manageable for research object. Second is data display that works for the organization and management of the available information in a way to draw conclusion. Third is Data drawing and verifying conclusion in which explanation of the responses has been given and includes patterns, explanations, propositions and configurations. These steps have been taken into account for the analysis of the data. Information from the interview noted down in manageable and organized way that enabled to draw conclusions from the findings. Other documentation and theories used to compare the findings with the previous researches and for the verification of the conclusion.

2.2.5. Validity and Reliability

To avoid the possibility of getting the wrong answers, there is a strong need to pay attention on the research design through checking on the information validity and reliability to maintain the quality standards (Saunders et al. 2003). Validity is the instruments ability to measure what is intended to measure. And Reliability means the consistency of the information that assures that the responses that I got today will prolong for some future period of time as well (Zikmund 2000).

Validity has been checked by taking information from the senior quality manager and also includes open question so he can express freely regarding his ideas and feelings. Reliability is assessed by checking that all the measures included needs to produce the same results on other occasions. And number of precautionary measures has been taken while using documentation in form of the print sources and scientific articles. And also proper attention pays before the collection of the primary data in which interview guide was properly made with thoughtful attention. And guide includes the right kind and number of questions that address the topic in a cohesive manner. All the selected scientific research articles and theories analysed clearly in the literature review. And case study is prepared and analysed in comparison with the previous literature to conclude the finding in an authentic manner.
3. THEORETICAL FRAMEWORK - CONTEMPORARY RESEARCH (LITERATURE REVIEW)

3.1. Why a Theory is important for Research

Theory is important for each and every research, and talking about this particular research, the theory is important because first it is required to look at people who previously worked on this area. And what they said about the training, productivity tools, efficiency and then it is required to look in a way that whether this theory apply in the real application. Then I saw the training mechanism of the NPO that what they are doing to enhance the businesses performance, and also discuss the case study of textile mills. Then I develop further understanding that what’s needed to be done in order to make business performance more efficient and effective.

3.2. Previous Studies

The research survey on need of skill was conducted in the selective organizations with the defined parameters. The survey revealed that most of the industries do not give due importance to the training courses and programs which results in poor performance of the organization and business in terms of production operations and efficiencies (NPCINDIA 2009).

Blundell, Dearden and Meghir (1999) provided a review of the evidence on the returns to education and training for the individual, the firm and the economy at large. American Society for Training and Development’s 2003 State Report showed a positive relationship between training expenditures and both revenues and profitability. Moreover, another study, funded by the U.S. Department of Education with the Bureau of Census, determined how training impacted productivity and Business Performance. The results showed that increasing an individual’s educational level by 10% increased productivity by 8.6%; increasing an individual’s work hours by 10% increased productivity by 6.0%. According to (Wright et al. 2001) businesses that increased their annual training budget grew profits by 11.4%. Learning businesses increased turnover by 66% more than those who didn’t invest in training - 15% growth, compared to 9%. Three in four (75%) of companies who have seen measurable staff improvements following training also saw profit increases. Nearly all companies (95%) were in favor of training, saying it is essential for success, with three in four (73%) strongly in favor, but just half (51%) have increased their budget.
Other studies offered the evidence to some extent that improved productivity was generated by training (Booth 1991; Brown 1990; Dockery & Norris 1996; Duncan & Hoffman, 1996; Lillard & Tan 1992; Lynch 1996; Mincer 1993). In a survey of 18 companies in Hong Kong, Malaysia, Indonesia, South Korea, Taiwan and Singapore, managers perceived training to generate beneficial outcomes for their businesses. Loundes (1999) also provided evidence showing the impact of training on business productivity improvement. Moreover, Bartel (1994) found that the implementation of new employee training programs significantly increased the productivity. Using the data from the employment opportunities pilot projects (EOPP), Bishop (1990) documented the increase of the productivity of newly hired personnel occurred as a result of the participation in firms’ training program. According to (Holzer et al. 1993) firms that offered more formal training had higher quality work performed by their employees.

According to Mullin (2003), training leads to competent and motivated employees, which in turn leads to fewer problems in the production process and the retention of happier clients. The benefits from training as identified by management included improved occupational health and safety outcomes, greater motivation, lower staff turnover, lower wastage, flexible workforce, higher productivity or improved quality of products and services, instilling corporate culture or strategic goals and a range of noneconomic benefits (Billet & Cooper 1997; Dockery et al. 1997). In surveys conducted by the Centre for Labor Market Research in Australia, employers believed that training benefited the firms (Dockery et al. 1997).

3.3. Theory on Training

The integration of training in the firm’s business strategies is reported in several studies. For instance, Bartel (1994) found that firms that actively planned their human resources were more likely to propose training. The function of training as part of the broader human resource strategies of a range of firms in the UK developed a framework that allowed training to become a response in the competitive environment. Moreover, training has been frequently perceived to be integrated with broader structural change and innovation inside the firms (Billet & Cooper 1997).

In a survey of 18 companies in Hong Kong, Malaysia, Indonesia, South Korea, Taiwan and Singapore, it is found that 60% of the firms established training programs to address the skill shortages in their companies. According to Dockery (2007) training needs to be considered in a
wider strategic context, the researcher firmly stated that “training is an important tool in the implementation of innovations and other business changes”.

Training professionals need to improve their awareness and involvement in the integration of training in various business strategies if they want to increase their strategic visibility, importance, and credibility in their firms. Top management and executives need to genuinely realize the strategic importance of the training function and training professionals as a value-added source for sustained competitive advantage. They can do it by increasing the level of training professionals’ involvement in the business strategies and having a structure that clearly aligns training activities with corporate objectives and goals.

By various integrated groups and implications of value chain model for strategically effective training programs, this project report has attached to the existing body of knowledge about strategically oriented training interventions and their linkage with the competitive strategic management approaches of the companies. The tools hypothesize are based on the theoretical applications which is grounded and exploratory verification, adding more to that, quantitative research is the demand. So as to validate the strong fact of hypothesized linkages reflected in these models. The action plan and relationships theorized in the paper, would develop increase understanding the strategic relationships between training, productivity and fierce competitive strategy of the firms to accomplish and progress sustained competitive advantage (Nikandrou & Papalexandris 2007).

The tools and techniques of strategic training mechanism and strategic training need assessment have been revised to reflect strategic connection between training modules and competitive strategy. Both theorists and practitioners would be assisted and guided with the debate to fully imprison the position of training effectiveness and, thereby, develop useful training programs consistent with that of the competitive strategy which would be taken up by the organizational mechanism (Holzer et al. 1993).

The conceptual ways to competences, business development and training matters is the primary focus of the academic research structures for learning proposed by many papers. While the rest use case studies and surveys to comprehend, explain or illustrate the current conditions and propose means of making things better (Holzer et al. 1993).
One more main thought of school is the creation of knowledge and spreading it in society through training is not dichotomous, marked, on the one hand, by advance or elite-based production training in the scientific arena. And, on the other hand day-to-day or marginal training at small levels of civilization. This is throttled major by the high level management that it becomes part of organizational development (Holzer et al. 1993).

Human resource managers who were in charge of the design and implementation of the business development and training needed to focus on the corporate business vision and long-term growth strategies. The researcher concluded by suggesting that firms that integrate strategic management development into competitive strategy formulation process will find that they have a greater degree of flexibility in the allocation and efficient usage of their managerial talents while becoming effectively proactive to constantly changing market conditions (Holzer et al. 1993). Moreover, training mangers needs to develop a strategic plan that was demonstrably aligned with the company. Likewise, one of the many benefits from training as identified by management was instilling corporate culture or strategic goals (Billet & Cooper 1997; Dockery et al. 1997).

3.4. Theory on Productivity Tools
According to (Dockery et al. 1997) impact of training has a positive, constructive and significant effect on productivity and various supplementary areas. Training action plan also has an affirmative and noteworthy impact on wages (Dockery et al. 1997). Within Organizational teams, the result of training on productivity mechanism is large and prominent for blue-collars, but small and not too large for white collars (Ballot et al. 2002).

In successful organizations two important mechanisms according to the business excellence and the related infrastructure are leadership and client focus (KPC 2010). These respectively are “pushing” and “pulling,” of productivity. Organizations having good performance reveal certain characteristics, which are distributed in the course of or by the people in them (MPC 2010). Excellent leadership being elementary amongst those characteristics. System remains to be the platform for the people to work, while managers work on the method to have it improved (Barton 2009).
Mr. Bruce Searle’s shared the best practices adopted by many Australian organizations in the areas for the demonstrating projects. Towards its international training and its impacts, the APO (Asian Productivity Organization) took start to evaluate their efforts. A benchmarking testing at the balanced scorecard was conducted in Australia in the year 2009 that makes a calculated performance with the use of advance methodologies. The core purpose for creating benchmarking was in order to make organizations participate and to share and study as to how should a balanced scorecard be developed. This benchmarking mechanism was witnessed by 15 companies.

The project work suggests that experiential proof of the “Asian Miracle” suggests that input growth was the secret of the success story of Asian Tigers, i.e., Hong Kong, Republic of Korea, Singapore, and Republic of China. This had achieved more than a four-fold increase in per capita income over the 30-year phase from the mid-1960s. Such examples are judge against with the circumstances of Pakistan. Labor productivity growth was chiefly explained by capital relying with TFP growth playing an astonishingly little role in its success (NPO 2011). Lessons that are supposed to be learnt are why those countries can activate input in a much correct manner than other countries. And how they can achieve and stand high rates of saving and investment (KPC 2011). The possibility to movement into highly productive sectors is a vital element of this productive assimilation of factor inputs which is highlighted regarding other factors (Barton 2009).

There is a reason that why some businesses, organizations and countries are more successful than others, because those organizations and businesses fully satisfy the needs of their societies. So the proper word for this is Efficiency - and that means that they properly satisfy the needs and wants of their valued customers on prices that are sufficient for them to cover the costs for the businesses that they put in to producing that products and services (Maartens 2008). Effectiveness is the phenomena in which the actual output corresponds to the planned outputs. And Efficiency is the actual outputs to actual inputs while Productivity is the mixture or fusion of efficiency and effectiveness(Maartens 2008). Productivity is all about making and doing things happen but if we want to go ahead on the next level than we need to focus on the efficiency to achieve larger productivity (Bohl 2008). Businesses always looking for efficiency
and productivity in the organizations during the times of crises. And efficiency and productivity came from the subordinate’s performances that can be achieved through adapting effective productivity tools (Buchanan 2009). Effectiveness is about doing the things in a right manner that means to direct the efforts and accomplish those things that takes you closer towards your objectives. Overall the key to achieve efficiency, effectiveness and productivity is to do the next right thing in a right way (Bohl 2008).

Efficiency is the process in which business use its resources and capabilities as inputs to achieve desired output. But in this process some inputs may be wasted, so businesses need to improve the efficiency by reducing the number of wastage inputs. Effectiveness refers to the extent of achievement of business objectives. For example for some business its goal may be to capture larger market share even it means that some measure will reduce its profits in the short term. So this company measuring its effectiveness in terms of market growth perspective (Bindya 2009).

Purpose determines the right direction of our journey towards success. So if someone is doing things that are accordance to his purpose, than that person is effective. And the first step for any business who strives to achieve productivity into their business operation needs to be effective and follow the right purpose. And then do all the other things to achieve that purpose. After choosing the right things, there is a need to do things in the right way by using right tools to achieve efficiency. And at the end by gathering the mixture of both effectiveness and efficiency in which we do the right things in the right manner then we finally got productivity (Latumahina 2006).

Mechanism of Productivity is ideally the efficient and effective management of resources (Aghion & Howitt 1998). Progressing in a better way in the arena of productivity provides an excellent return on investment. Productivity, therefore, defines to be creating more value for the end users by making improved use of the mechanism and the resources employed in the production processes of a business (Boon & Eijken 1997).

The scientific definition of “Productivity” is quite logical. It is the ratio between input and output. When a bigger output is obtained with the same input, or the same output is obtained with less input, you can say that higher productivity has been achieved and thus efficiency is
obtained (KPC 2011). As such, the word “productivity” is often translated as meaning efficiency or rationalization (Booth 1993).

In the contemporary circumstances, numerous factors needs to be focused to improve productivity. All these factors have direct or indirect linkages with productivity. These are technology, management systems and practices, quality, labor-management relations, organizational climate, human resources development, etc. These elements are the real and basic elements for productivity improvement and enhancement in any country (Aghion & Howitt 1998).

The mechanism for Total Factor Productivity (TFP) makes an idea of the ratio of the efficiency of the utilization of both capital and man power. It is also regarded as a measure of the degree of technological modernization associated with economic growth. Higher TFP growth states efficient utilization and management of resources. At the national arena, Total Factor Productivity (TFP) growth reflects the portion of the growth in the Gross Domestic Product (GDP) that is not explained by the growth in inputs such as employment, capital investment and natural resources. At the firm level, TFP growth implies the upgrading of skilled and technical human resources, application of IT and formation of new technologies, adoption of best management practices and developing corporate culture and work ethics (KPC 2011)
4. EMPIRICAL FINDINGS

4.1. Introduction- Organizational Overview

Name: NPO (National Productivity Organization)

Logo: NPO

This section is based on the primary and secondary sources through visiting NPO web page plus adding some notes by having some information from the Interview. National Productivity Organization (NPO) has recognized itself as a research and resource institution affiliated with the support of Asian Productivity Organization (APO) Tokyo-Japan (NPO 2011). NPO is also operating as a Liaison Office of Asian Productivity Organization and is a sole representative for Pakistan. Asian Productivity Organization has strong linkages with twenty Asian Countries with the vision to promote productivity mechanism across Asia and quality consciousness among the public and private sector organization (NPO 2011). NPO hold the importance to be the only government institution which is heading the Productivity Movement in country. Serving as a capacity-enhancer, NPO has given capability to individuals and companies, especially those in public and community services, to implement their tasks effectively and efficiently (NPO 2011). And NPO further works for the vigor, competence, productivity and determination of the individuals in these institutions.

NPO's Training and Consultancy purpose is to enhance the development of human resources and organizational competitiveness to face the challenges of globalization effectively. And NPO also works to upgrade local expertise in the area of P&Q management and measurement. So any organization and its success are the focus of NPO trainings. A step-by-step approach breaks down complicated topics into concepts that are easy to understand and implement. Their interactive learning environment reduces the learning curve by including break-out session, videos and teamwork. As a result, participants are able to apply their new skills to their work immediately.
NPO employs a team of highly skilled professional instructors to ensure effective training. Besides possessing strong teaching and mentoring skills, they have practical experience in the ministry of industry and production division. They motivate, encourage and take genuine interest in enhancing business performance of any organization. NPO endeavours to enhance productivity of the organizations, especially domestic industrial and services sectors by restructuring and revitalizing enterprises and upgrading human resource skills (NPO 2011). Their approach deals with the business dimensions of technical skills, soft skills and productivity enhancement and its relation to the global perspective.

4.2. NPOs Training Programs

This section is also based on the secondary sources by having information from the NPO web page, that I explain in further detail that what kind of training programs they are offering to enhance business performance. NPO offers wide range of training courses which includes business management as well as technical programs. Their trainers include wide range of intellectuals who are proven experts in their field. National Productivity Organizations activities have a general feature that enriches with the training that is provided on practical grounds and is done with the combination of: 1) experts’ lectures; 2) having field visits to factories, farms and also facilities observation of actual applications; and 3) country reports by contributor for the sharing of occurrence (NPO 2011). The training programs and sessions of NPO are wished-for immediate use and applicable to members as possible. There is an expectation from the participants that they can create multiplier effects by publicizing their newly attained knowledge and know-how to others in their home countries (NPO 2011). A diverse group of productivity stakeholders in member countries is targeted by the NPO activity. A range of training approaches or methodologies employed in organizing them are as follows:

- **Forum (FRM):** To offer a domain for debate, dialogues, and networking are essential key players is described as a forum (NPO 2011). Managers at top level, institutional and personnel officials and specialists who are expected to be part of the session.

- **Conference (CON):** This requires influential people to come at one platform and discuss the critical agenda. Conference helps to combined input that build agreement among stakeholders on the direction of the productivity movement in a member country (NPO 2011).
Such platforms draw attention of the masses and the objective is disseminated through media and communications. Such sessions are in the form of roundtable conferences on international productivity, or simply international conference platforms.

- **Observational Study Mission (OSM):** Research that comes on the basis of an observation provides an arena for initial observation and exposure to real applications of specific subjects by companies and industries. There are lectures and ideas that added in an observational study mission. Middle and top managers, institutional personnel officials and consultants, formulate participants in the mission study of observations and present analysis (NPO 2011).

- **Seminar (SEM):** An event that has a definite concept that is delivered through teaching style and presentations by session leader and a dialog with the individuals attending and resource persons. A seminar may than include an affiliated visit on site that offers an integral part of concept. In order to share experiences and practices participants are likely to represent their national agenda and problems to bring attention of the global players (NPO 2011). The ideal people for seminars are managers from higher officials, consultants, officials and professors.

- **Workshop (WSP):** Business Productivity executed by adopting comprehensive think tanks who collectively discuss and undertaken in an interactive manner. And emphasizing problem solving is referred as a workshop mechanism. The learning may take place primarily on that. A few presentations or lectures and relevant visits on sites may be included, while the small group activities or exercises are the main focus area of the workshops (NPO 2011). The target groups for workshops are all the people concerned with matter of productivity.

- **Training course (TRC):** Productivity concept is delivered in the form of class rooms lectures, presentations, directions and commands by trainers whose primary objective is to disseminate the knowledge (NPO 2011). Middle and top level managers, officials, consultants, and academic personnel shall be the focused group.

### 4.3. NPOs Productivity Tools

The information in this section is based on the mix of secondary and primary sources. Secondary sources describe the well established productivity tools that are available for access
to all the businesses. Primary sources are included in a way by explaining the application of those tools in the NPO that is taken via interview. Secondary sources include the mix of scientific articles and different web pages of productivity organizations that are working across several Asian countries. The mechanism of Productivity is one of the important determinants of competitiveness of any economy (Black & Lynch 1996). Although nations in Asia are acutely acknowledge the significance of productivity in the context of getting improved standards of living for the population (KPC 2011). Although the potential for productivity improvement has not been fully explored in many nations. A main reason for the poor economic performance of many economies and the consequent need to introduce more competition under the conditions of market economy is the low levels of productivity economic engine (Black & Lynch 1996). Productivity is a main issue in economic and business development (NPO 2011). Indeed, there is strong macro-economic statistical evidence that the more productive business economy is, higher is the personal income of workers and lower is the rate of inflation in the long run.

From a longer perspective an international trends reflects that there is a strong correlation between the dynamics of business productivity and level of employment (Ballot et al. 2002). Not only labor, capital and total factor productivity have elements of productivity. However populations, education, new and pioneering in technology, proliferation in information technology and environmental policies also constitute elements of productivity (Black & Lynch 1996). At the present state I strongly believe that business productivity improvement could be and should be among the initial strategic objectives of the government’s economic and social policies. This would help in improve balance in objectives and budget spread out between different functional ministries as well as set up economic and social importance.

Pakistan loses major amount of wealth due to inferior quality and wastage. Our Human Capital productivity growth rate has dropped from 6.13% in 2001 to 4.65% in 2004; overall total factor productivity growth ratio remains as low as 1.04% (NPO, 2011). The key contributing factors to these low rates are lack of modern training, awareness on different tools and methods and outdated production technologies along with inferior working conditions.

(Tool # 1)

**Employee involvement through quality circles**
According to NPO businesses need to have a well-structured training mechanism to promote self-managed and controlled teams to tackle the issues after problem identification to achieve consistent improvement at the workplace (Figure 1). This is one of the tool that NPO used. The Quality Circle (QC) is modern tool for problem-solving issues and is sometimes used and called as QC story and is based on the plan-do-check-act (PDCA) or Deming cycle (Figure 2).
While evaluating different businesses performance NPO used green productivity. It focuses on all levels and components of an organization, including raw products, processes, finished products and the garbage or useless material. And it makes sure that products or services meet clients’ needs and productivity is thus maintained or improved (Productivitypromotion 2011). NPO used Green Productivity methodology and it has six levels and thirteen tasks and is based on the ongoing mechanism of the Green cycle to achieve TQM at the workplace.

Benchmarking: Capturing best practices or breakthrough improvements

NPO used Benchmarking to improve performance or service by getting hold of an in appropriate process and suggest where changes are to be made (Blanchflower & Lynch 1992). Benchmarking does not mean simply copying others’ practices rather than molding their practices by keeping others ideal practices as a base.
The types of benchmarking depend upon its scope and approaches the companies adopt to start it. Some of them are highlighted below:

• **Process benchmarking:**

  NPO used process benchmarking and that concentrates on refining selective critical mechanism and operations (Productivitypromotion 2011).

• **Performance benchmarking:**

  NPO used performance benchmarking that deals on gauging competitive points through comparing performance characteristics of their evaluating business offerings with the competitors (Productivitypromotion 2011).
• **Internal benchmarking:**

NPO used this approach to filter and match the business model within the company. The main plus point of this approach is that it offers an access to important information that is comparatively convenient to find out if required (Productivitypromotion 2011).

• **Competitive benchmarking:**

It’s a step-by-step operation of comparing a business model with that of core competitors. This benchmarking is a time consuming and is the most hard to deliver (Productivitypromotion, 2011).

• **Functional benchmarking:**

It addresses and compares business unit with that of similar ones within or from different industries to find different options of making functions or work operational mechanism (Productivitypromotion 2011).

• **Cooperative or collaborative benchmarking:**

Under Cooperative and collaborative benchmarking many firms are asked to come forward and form a benchmarking group and disseminate their best practices so they become an example (Productivitypromotion 2011).

**(Tool # 4)**

**Harnessing collective wisdom through employee suggestion schemes**

Employee suggestion schemes lays an analysis that hits at suggestions with a high impact. And rewards are offered to employees whose feedback has a significant impact on the financial performance of the firm. There is a chance that few suggestions are received since highly creative suggestions and feedback is hard and rare to come about (Ballot et al. 1998). NPO suggest that these employee suggestion schemes are very useful if managers of a company incorporated them in to the systems in an efficient manner.
A well-defined ESS with comprehensive layout of workout before its mobilization should have a company structure, policies, management system, appraisal method, reward system, incentive and recognition and appreciation system, and quality maintenance system (Figure 2).

(Figure 6. Process flow of the operation of a typical ESS)

(Tool #5)

Understanding Six Sigma and DMAIC methodology

According to NPO Six Sigma offers companies a long term path way to right direction through quality services and optimum customer satisfaction.
Six Sigma and process variation

Customer satisfaction always is based on consistent products and services being offered. In order to achieve level of consistency an inter-related mechanism for better process capability and reduced operational variation is required. The more the variation in an operational unit the greater the chances of defects within. The keys solution lies in a fact that operational excellence in sources of variation should be addressed and embarked for attention (WCECS 2008).

<table>
<thead>
<tr>
<th>Define</th>
<th>Understand which process is to be improved and set a goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure</td>
<td>Measure the current status</td>
</tr>
<tr>
<td>Analyze</td>
<td>Develop cause and effect theories of the cause(s) of the problem and scientifically search for the root</td>
</tr>
<tr>
<td>Improve</td>
<td>Develop and implement solutions</td>
</tr>
<tr>
<td>Control</td>
<td>Sustain the improvement</td>
</tr>
</tbody>
</table>

*Figure 2. Steps in the Six Sigma DMAIC methodology.*

(Figure 7. Steps in the Six Sigma DMAIC methodology)

In order to produce expected results the responsibility of each member in an organization should be defined and aligned. Trainings should be focused on all level of organization rather than only upper level, however, preservation from the top is required (WCECS 2008).

(Tool # 6)

Lean Management

Lean management gives its affects to entire organization and supply chain and addresses the core arena for improvement. The overall idea focuses on an approach in which external focus takes place from an internal focus (NPO 2011).

The benefits of lean management are given below:

- Relatively decreased lead times and also an increased yield on inventory.
- Productivity enhancement with quality.
- Better cliental services.
- Reduced cost with high profit.

(Tool # 7)

**The Balanced Scorecard**

The implementation of Balanced Score Cards (BSC) can be applied in two stages. Phase one defines design and implementation of system and phase two defines how to use and implement it. The results can be affective if leadership has clear cut vision of its benefits (Kaplan & Norton 1996).

**BSC to improve organizational performance**

(Figure 8. Generic balance scorecard)

Implementation is only successful when the leadership relies on the results; better decisions are made (Kaplan & Norton 1996).

(Tool # 8)

**Workplace cooperation and labor management councils**
The satisfaction level can be increased drastically by improving relationships between labor and management and can lead to more satisfaction and increased productivity (NPO 2011). It’s like giving everyone importance in overall productivity mechanism. The re-design enables the partners to work in a new way and to encourage group problem solving, knowledge management, teamwork, and skill development (Booth et al. 1999).

Participation, on the other hand, is a crucial component of workplace empowerment. Empowerment involves decentralizing power within the organization to individual decision makers down to the bottom rung of the workforce (Booth et al. 1999). It adds dynamism to the employer-employee relationship by giving workers not only a voice in decision-making on matters that affect their interest and welfare but also an opportunity to contribute creative, innovative ideas to achieve enhanced product or service quality and productivity (NPO 2011).

4.4. Threshold Technologies in Brief

The information in this section presents the mix of primary and secondary sources. Secondary sources are the web pages of different productivity organizations and primary source includes by adding some thoughts that were discussed during the interview with the NPO representator. NPO Pakistan is a well-defined organization and has complex hierarchy where chain of command is typically centralized. The main directives are governed by Ministry of Industries & Production, Government of Pakistan. The chief is appointed through the committee of Ministry that comes under the direct approval of Prime Minister of Pakistan (NPO 2011).

- The NPO aggressively operates with a vision to implement the advanced management systems based on integrated efforts between labor and management, to bring in place the effective management re-works, train human resources, and also present public strategies for socio-economic reform in Pakistan (NPO 2011). As the only platform of its kind in Pakistan is the NPO that is determined to making a prominent contribution to socio-economic development in Pakistan and throughout the world.

- Serve as Catalyst to improve the engine of productivity to achieve global competitiveness.
• NPO Vision is to lead the Productivity activities in Pakistan and create an enabling environment and to introduce and Implement Programs/Initiatives that increases Productivity (NPO 2011).

• Increase productivity and competitiveness of Pakistan’s Industry.

• To improve the level of information on Productivity and Quality leading to value enrichment. Develop and strengthen industrial areas in compliance with international ideal practices, fully utilizing our details national and international networks (NPO 2011).

• To increase the national output and competitiveness level. Main factor behind of growth of productivity is the development of human resources (KPC 2011).

• Human resources need to be developed towards required skills. Improved skills would help in increasing the competitiveness, higher growth of output, exports, employment, and foreign investment (MPC 2011).

• Vocational training institutions, because of their contribution to the development of skills and competencies, are a source of comparative advantage to promote growth in economic productivity. (productivitypromotion, 2011).

• Human resources are energies, skills, talent and knowledge which are applied to the production of goods or the rendering of useful services.

4.5. Why is there a need of NPO in Pakistan?

The information in this section includes from the secondary sources. That includes what different authors have said in their scientific articles and some information from the productivity organizations web pages by inculcating once own thought along with the sources. Long term productivity growth, can’t come without well-functioning and well planned industrial institutions and their importance can’t be left behind (Aghion & Howitt 1998). Since through their
organizational mechanism of learning affects professional and industrial community who are equipped with specialized skills and techniques, which can further be capitalized for progressive industrial role (Blundell & Bond 1998). Looking things from long-term perspective, well trained professionals can add continuous contribution in the initiative that is meant for an improvement in the productivity (Booth et al. 1999). Thus, the growth of an economy in the long run hinges on how the economy utilizes its resources more effectively to enhance productivity (MPC 2011). And subsequently Pakistan’s biggest industrial challenge today is to inculcate catalysts at vital industrial points that leave long lasting effect on overall industrial and corporate productivity (NPO 2011). This catalyst serves as guides and a source of knowledge for all.

4.6. NPO’s In Other Countries

The information in this section includes from both primary and secondary sources. Secondary source includes the NPO web page. And primary source includes the information that is included from the notes taken in between the interview. Pakistan is not the only one having NPO, however there are other 20 countries in Asia where organizations with similar vision are operating. Asian Productivity Organization holds a pivotal position among twenty member countries. NPO also served as a liaison office of APO that is mostly funded by the government of Pakistan (NPO 2011). Each platform is dedicated for the specific mandate and i.e. to promote productivity movement across national industrial arena. Each member country operates as a separate entity and acts as a catalyst in productivity movement.

Each year the APO organizes a Workshop Meeting with the heads of the NPOs to evaluate the previous year's projects, deliberate and formulate the APO's rolling Five-Year Plan and annual programs, and exchange experiences on productivity movement (NPO 2011). The WSM also discusses productivity perspectives, guidelines for future programs, and the emerging needs of member countries. Below given is the list of NPO’s:

Korean Productivity Council       China Productivity Center       Fiji Productivity Centre
4.7. Competitiveness and Manpower Productivity in Pakistan:

The information in this section comprises the mix of both primary and secondary sources. Secondary sources include productivity organizations working at India. And primary sources include the information taken from the interview regarding the factor that is not in our control. To be at a competitive edge and being on a sustainable basis it is essential to expand productivity (NPCINDIA 2011). There are certain factors of production which are not in our control; for example, Pakistan is an energy deficient country dependent on imported oil (the oil bill during the financial year ‘09 was 35% of our total imports). The increasing cost of energy directly
impinges on the competitiveness of our entrepreneurs. However, there are other factors which are very much in our domain of control especially productivity of labor and living condition.

4.8. Productivity of Labour:

A Pakistani Industrial Study

The information in this section is based on the secondary sources that are based on the NPO web page and what different authors have said in their scientific articles. Pakistan is facing severe skill gap and skill shortage i.e. both a quantitative and qualitative gap. The Scientific Institutes curriculum is subject to old mechanism of research and development. The training is imparted on obsolete machinery and the competency standards are set for a limited numbers of trades i.e. only around fifty (NPO 2011). The following graph reflects the trend of labor productivity of Pakistan in comparison to Malaysia and India.

A higher concern would be the long-term perspective of sustainable expansion in productivity. Business productivity growth determines a nation’s future economic prosperity. This growth depends on several factors such as the quantitative expansion of physical capital per worker (or capital intensity). And TFP growth which measures improvement in the qualitative aspects of labor and capital inputs. And the efficiency with which these inputs work together in a cohesive manner (Blundell & Bond 1998).

Table 2 shows the TFP trend of Pakistan in comparison with India, Malaysia and Philippine Improvements in TFP reflect skills upgrading, better organization, good working conditions and management systems, advancement and improvement in methods of production, as well as the shift towards higher added value process and industries.
An economy would have to encounter competition from other countries offering similar or even better rewards (Aghion & Howitt 1998). A better option as a long term strategy, therefore, would be to strive for a productivity driven economic growth. This involves the qualitative expansion of labor and capital inputs and the qualitative improvements of these inputs (Blundell & Bond 1998). Of these, the qualitative inputs of capital and workforce betterment would be of greater idea of concern.
5. **ANALYSIS**

Analysis is done through analyzing all the training techniques of the NPO, methodologies and working mechanism that NPO undertakes for its role of enhancing productivity movement in the industry. Established parameters like productivity tools, established theories and principals proposed by many scientific researchers and scientists in their respective field are also analyzed. In order to increase the business performance, NPO implements various tools, methodologies & techniques at industrial platform in order to make things right and productive.

Organizations must need to ensure that their employees have the right skills is crucial to the growth and success of their business. The business case for developing your staff is compelling. Research shows that training can increase productivity and quality of work, increase profits, reduce staff turnover and absenteeism, improve customer satisfaction and improve motivation. Training that achieves these results is normally linked to business goals and performance, part of a company-wide strategy, focused on setting objectives for employees, part of a company policy, which sets out who is responsible for planning, implementing and evaluating training.

5.1. **Case Analysis of Textile Mills:**

**A Case Study of “Textile Mills”**

**Introduction:**

National Productivity Organization (NPO) took an internal audit of the textile mill under Ministry of Industries and Production Division Government of Pakistan in close cooperation with the selected beneficiaries and NPO experts. Based on the scope of work as determined by NPO (Concept Paper (March 2002) as agreed between All Pakistan Textile Mills Association (APTMA), Punjab and NPO, this study was conducted.

The exercise was designed around the following objectives:

1. To develop in-depth understanding, and application of benchmarking in Businesses.

2. To identify and encourage the implementation of best practices so as to minimize costs, improve efficiencies and productivity.
3. To collect information on best practices in different production Process/sections of the mills under the survey. And to develop comparative data amongst the local mills as well as similar projects in other Asian countries. (The idea was to identify functions and processes in each department of a spinning unit, and the related results being obtained. Subsequently, overall results of the departments would to be linked and evaluated. And reasons for differences in various mills would be assessed. Simultaneously, the practices in use would be determined).

**Methodology used**

Phase I

- Initial Audit

Phase II

- Audit at the end of the intervention

Phase III

- Audit at the end of the Product Life Cycle

**TYPICAL CAUSES OF HIGH LABOR COSTS IN PAKISTAN**

- Standard Minute value is erroneous
- Insufficient man & machine utilization
- Poor line balancing
- Inconvenient work environment and housekeeping
- Unskilled quality management
- Machines at low levels of efficiency
- Ratio of indirect-to-direct labor is too high
- Range of products with little added value
- Machine maintenance is low
Weak work methods & process controls

Training is extremely weak, especially at middle management (NPO, 2011).

**The seven benchmarking fields under this project are:**

- Dyeing/ Finishing,
- Sewing,
- Knitting,
- Laundering,
- Printing,
- Industrial Engineering &
- Maintenance (NPO, 2011)

**Benchmarking Parameters**

Following are the agreed benchmarking parameters from the respective technical Fields:

<table>
<thead>
<tr>
<th>Dyeing/Finishing, Knitting &amp; Laundering</th>
<th>Sewing, Industrial Engineering &amp; Maintenance</th>
</tr>
</thead>
</table>

1. Productivity
2. Work Method
3. Technological Strength
4. Time Line
5. Maintenance

- 1. Production per machine per shift
- 2. Marker efficiency
- 3. Defects percentage
- 4. B-Quality
- 5. Production moving system
- 6. Standard minute value
- 7. Through put time
- 8. On time delivery
6. Quality

7. House Keeping

8. Workers Conditions

9. Presence of Analytical Culture

10. Training

11. Product Development

**BENCHMARK RATINGS**

(Figure 11. Benchmarking Ratings)

**Scope of the Study**

The objective of the study was to find out the level of enhancement of productivity in Pakistan Textile Spinning sector. There are two types of mills at operational level in Pakistan. Their
average size is up to 25,000 spindles and large mills have more than 25,000 spindles. Despite of the fact that the equipment is almost the same in the two categories, there is a marked difference of production. Through research we find out that cotton is the best for lower count yarn. Some mills have been upgraded that has given considerable impact on their production outcome. NPO aims on this particular segment which is being exported (NPO 2011).

Pakistan is presently exporting coarse quality of yarn. By making this scenario as a short term goal, NPO decided to bench mark these mills (NPO 2011). The overall idea is to identify the gaps between the ideal level and current performance level. With such level of campaign being embarked on cotton spinning there is a greater chance of increasing export earnings and GDP (NPO 2011)

**Steps of the Benchmarking Study**

National Productivity Organization (NPO) adopted following procedures for conducting benchmarking exercise for cotton spinning mills.

In order to conduct quality audit whose primary goal was to increase productivity. The sample factories were taken into account. To distinguish them with unique identity, each factory was affiliated with unique alphabet letter, e.g. A, B, C, D, E and so on.

<table>
<thead>
<tr>
<th></th>
<th>BENCHMARKING STEPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What to benchmark</td>
</tr>
<tr>
<td>2</td>
<td>Plan benchmarking project</td>
</tr>
<tr>
<td>3</td>
<td>Understand &amp; analyze the current business practices that have been targeted for reform</td>
</tr>
<tr>
<td>4</td>
<td>Collect data and information of processes to be benchmarked</td>
</tr>
<tr>
<td>5</td>
<td>Analyze data/information to determine best practices</td>
</tr>
<tr>
<td>6</td>
<td>Determine best practices to be adopted</td>
</tr>
<tr>
<td>7</td>
<td>Implementation of Results</td>
</tr>
</tbody>
</table>

*(Figure 12. Benchmarking Steps)*

In overall quality audit to enhance the productivity, there were few factories taken into account. Each factory was affiliated by unique alphabet letter e.g. A, B, C, D….and so on.
Benchmarking Scores

Sewing & Industrial Engineering

<table>
<thead>
<tr>
<th>Sr. #</th>
<th>Description</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>L</th>
<th>AVG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Production per machine</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.29</td>
</tr>
<tr>
<td>2.</td>
<td>Marker efficiency</td>
<td>9</td>
<td>8</td>
<td>7</td>
<td>9</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8.29</td>
</tr>
<tr>
<td>3.</td>
<td>Defects percentage</td>
<td>1</td>
<td>2</td>
<td>-</td>
<td>4</td>
<td>7</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.67</td>
</tr>
<tr>
<td>4.</td>
<td>B-Quality %age</td>
<td>3</td>
<td>1</td>
<td>-</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.67</td>
</tr>
<tr>
<td>5.</td>
<td>Standard minute value</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.43</td>
</tr>
<tr>
<td>6.</td>
<td>Through put time</td>
<td>7</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.00</td>
</tr>
<tr>
<td>7.</td>
<td>On time delivery</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.00</td>
</tr>
<tr>
<td>8.</td>
<td>Production moving system</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>6</td>
<td>5</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.29</td>
</tr>
<tr>
<td>9.</td>
<td>Turnover</td>
<td>4</td>
<td>5</td>
<td>-</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.83</td>
</tr>
<tr>
<td>10.</td>
<td>Absenteeism</td>
<td>5</td>
<td>6</td>
<td>-</td>
<td>3</td>
<td>7</td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.00</td>
</tr>
<tr>
<td>11.</td>
<td>Direct to indirect ratio</td>
<td>4</td>
<td>5</td>
<td>-</td>
<td>5</td>
<td>-</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.20</td>
</tr>
<tr>
<td>12.</td>
<td>Safety &amp; Housekeeping</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.06</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL out of 120 points</strong></td>
<td>59</td>
<td>50</td>
<td>34</td>
<td>65</td>
<td>62</td>
<td>61</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>62.83</td>
</tr>
</tbody>
</table>

(Figure 13. Benchmarking Scores of Sewing and Industrial Engineering)

**Machine Maintenance**

<table>
<thead>
<tr>
<th>Sr. #</th>
<th>Description</th>
<th>E</th>
<th>F</th>
<th>L</th>
<th>AVG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Preventive maintenance</td>
<td>5</td>
<td>8</td>
<td>8</td>
<td>7.00</td>
</tr>
<tr>
<td>2.</td>
<td>Machine per technician</td>
<td>3</td>
<td>8</td>
<td>9</td>
<td>6.67</td>
</tr>
<tr>
<td>3.</td>
<td>Spare part control</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>6.33</td>
</tr>
<tr>
<td>4.</td>
<td>Numbering system to machine</td>
<td>9</td>
<td>7</td>
<td>7</td>
<td>7.67</td>
</tr>
<tr>
<td>5.</td>
<td>Machine attachment control</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>6.33</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL out of 50 points</strong></td>
<td>27</td>
<td>37</td>
<td>38</td>
<td>34</td>
</tr>
</tbody>
</table>

(Figure 14. Benchmarking Scores of Machine Maintenance)
## Dyeing/Finishing & Laundry

<table>
<thead>
<tr>
<th>Description</th>
<th>Company Codes / Evaluation Rate</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>AVG.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>E</td>
<td>F</td>
<td>H</td>
<td>I</td>
<td>J</td>
</tr>
<tr>
<td>Work Method</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>5</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Technological Strength</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Time Line</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Maintenance</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Quality</td>
<td>8</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>5</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>House Keeping</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>5</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Workers Conditions</td>
<td>8</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Presence of Analytical Culture</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>5</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Training</td>
<td>8</td>
<td>5</td>
<td>6</td>
<td>9</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Product Development</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL out of 100 points</td>
<td>69</td>
<td>47</td>
<td>65</td>
<td>89</td>
<td>49</td>
<td>40</td>
<td>59</td>
</tr>
</tbody>
</table>

*(Figure 15. Benchmarking Scores of Dyeing / Finishing & Laundry)*

## Knitting

<table>
<thead>
<tr>
<th>Description</th>
<th>Company Codes / Evaluation Rate</th>
<th></th>
<th></th>
<th>AVG.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Productivity</td>
<td>5</td>
<td>9</td>
<td>7.00</td>
<td></td>
</tr>
<tr>
<td>Work Method</td>
<td>5</td>
<td>9</td>
<td>7.00</td>
<td></td>
</tr>
<tr>
<td>Technological Strength</td>
<td>7</td>
<td>8</td>
<td>7.50</td>
<td></td>
</tr>
<tr>
<td>Time Line</td>
<td>3</td>
<td>8</td>
<td>5.50</td>
<td></td>
</tr>
<tr>
<td>Maintenance</td>
<td>7</td>
<td>9</td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>6</td>
<td>9</td>
<td>7.50</td>
<td></td>
</tr>
<tr>
<td>House Keeping</td>
<td>3</td>
<td>8</td>
<td>5.50</td>
<td></td>
</tr>
<tr>
<td>Workers Conditions</td>
<td>3</td>
<td>9</td>
<td>6.00</td>
<td></td>
</tr>
<tr>
<td>Presence of Analytical Culture</td>
<td>3</td>
<td>8</td>
<td>5.50</td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td>1</td>
<td>8</td>
<td>4.50</td>
<td></td>
</tr>
<tr>
<td>Product Development</td>
<td>3</td>
<td>8</td>
<td>5.50</td>
<td></td>
</tr>
<tr>
<td>TOTAL out of 100 points</td>
<td>46</td>
<td>93</td>
<td>69.50</td>
<td></td>
</tr>
</tbody>
</table>
(Figure 16. Benchmarking Scores of Knitting)

General Operational Observations in

Sewing and Maintenance

✓ Factory B and L had efficient and organized plant layout.
✓ L and E had good workstations.
✓ Factories L, I and E have flexible and comfortable chairs that were provided to operators.
✓ Factory L is utilizing natural light taking them to better energy efficient exercises.
✓ Factory A and E are equipped with complete technology, e.g. Garment Gerber (GG) technology, while factory L is partially equipped.
✓ Factory C, J and L sewing machines were not placed under the tube light making hard for worker to operate.
✓ Factory E and L have relatively better working conditions.
✓ Factory L trolleys of different colors were used; each trolley was affiliated with different unit or sector.
✓ In almost all factories dysfunctional machines were not properly covered.
✓ In factory A and B, high percentage of rework was observed.
✓ In factory L, housekeeping was better and displaying of tools was also observed in the maintenance department.
✓ Most of the factories lacked discipline in production because of the fact that most of the employees were sub-contractual.
✓ Poor housekeeping was observed in almost all the factories.
✓ The QC units were over loaded by man power.
✓ Almost all the factories followed routine tasks e.g. oiling, greasing and cleaning (NPO 2011).
Figure 17 shows the operational observation across different textile mills. The factors that are taken into an account for study includes technological strength, work method, time line, maintenance, product development, quality, presence of analytical culture, training etc. In this figure it is clearly identified through different bars that which factory position is at what level in terms of these factors.

Pictorial Snapshot /Poor Practices
Over crowded

Safety Issues

Lighting and housekeeping issues

Poor Fabric Handling (Dyeing)

(Figure 18. Poor Practices)
Figure 18 shows the practical snapshot of the poor practices that have been identified under study across different textile mills. Poor practices snapshots included overcrowdedness issues, poor housekeeping, rework and line balancing, compliance and safety issues etc. Snapshot of before and after measurement also been included in the end to show the results of the improved position of the factories.

**Findings**

a. It is observed that the level of technology and sophistication varies significantly from factory to factory. And mostly all of them requires up gradation of their current infrastructure.

b. What I have realized is that most of the factories lacked an in house expertise and a mechanism that addresses change within.

c. It is also noticed that most of the factories lacked the mechanism where operators can be evaluated and poor standards can be addressed to ensure product consistency.

d. There is a strong need of standard values to evaluate efficiency of production operations in a number of factories.

e. I strongly recommend that every factory have to have an organizational chart which later on leaded to over staffing.

f. There is a need of Proportion of direct and indirect personal according to international standards.

g. There is a need of proper standard times in almost all the factories.

h. It is also observed that all the factories are subject to insufficient space and poor layout.

i. Line balancing is poor that creates huge problems for clients.

j. There is a lack of product specification; therefore, poor production planning exists.

k. The work in progress is not well controlled and thus needs proper supervision.

l. If we analyze capital investments, equipment and machinery is generally in better working conditions, however, maintenance mechanism is weak. The time spent on repairs is usually not recorded.

m. While operating machines efficiency is taking place in most of the operational units. This is because of lack of investment in maintenance and smuggled spare parts.

n. There is a lack of training at both operator and supervisor level.
o. The recruitment mechanism is not systematic.

p. At all personal levels, technical training is lacking (NPO 2011).

Expected Improvements

After implementing this implementation plan following improvements can be expected in selected key performance indicators.

**Sewing/IE/Maintenance**

<table>
<thead>
<tr>
<th>Sr. #</th>
<th>Key Performance Indicator</th>
<th>Scored Points</th>
<th>Expected score after 3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Production per machine</td>
<td>7.29</td>
<td>8.00</td>
</tr>
<tr>
<td>2.</td>
<td>Defects %age</td>
<td>3.67</td>
<td>7.00</td>
</tr>
<tr>
<td>3.</td>
<td>B-Quality %age</td>
<td>2.67</td>
<td>5.00</td>
</tr>
<tr>
<td>4.</td>
<td>Through put time</td>
<td>6.00</td>
<td>7.00</td>
</tr>
<tr>
<td>5.</td>
<td>Safety &amp; housekeeping</td>
<td>4.86</td>
<td>7.00</td>
</tr>
<tr>
<td></td>
<td><strong>Average</strong></td>
<td><strong>4.90</strong></td>
<td><strong>6.80</strong></td>
</tr>
</tbody>
</table>

Cumulative improvement 38.00%

**Dyeing/Finishing**

<table>
<thead>
<tr>
<th>Sr. #</th>
<th>Key Performance Indicator</th>
<th>Scored Points</th>
<th>Expected score after 3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Work method</td>
<td>6.25</td>
<td>8.00</td>
</tr>
<tr>
<td>2.</td>
<td>Time line</td>
<td>5.50</td>
<td>9.00</td>
</tr>
<tr>
<td>3.</td>
<td>Quality</td>
<td>6.38</td>
<td>9.00</td>
</tr>
<tr>
<td>4.</td>
<td>Housekeeping</td>
<td>5.86</td>
<td>8.00</td>
</tr>
<tr>
<td>5.</td>
<td>Training</td>
<td>6.38</td>
<td>9.00</td>
</tr>
<tr>
<td></td>
<td><strong>Average</strong></td>
<td><strong>6.07</strong></td>
<td><strong>8.60</strong></td>
</tr>
</tbody>
</table>

Cumulative improvement 41.00%

**Knitting**

<table>
<thead>
<tr>
<th>Sr. #</th>
<th>Key Performance Indicator</th>
<th>Scored Points</th>
<th>Expected score after 3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Work method</td>
<td>7.00</td>
<td>8.00</td>
</tr>
<tr>
<td>2.</td>
<td>Time line</td>
<td>5.50</td>
<td>9.00</td>
</tr>
<tr>
<td>3.</td>
<td>Quality</td>
<td>7.50</td>
<td>9.00</td>
</tr>
<tr>
<td>4.</td>
<td>Housekeeping</td>
<td>5.50</td>
<td>8.00</td>
</tr>
<tr>
<td>5.</td>
<td>Training</td>
<td>4.50</td>
<td>8.00</td>
</tr>
<tr>
<td></td>
<td><strong>Average</strong></td>
<td><strong>6.00</strong></td>
<td><strong>8.4</strong></td>
</tr>
</tbody>
</table>

Cumulative improvement 40.00%
Figure 19 shows the tables of expected improvements. After implementing this implementation plan, there can be a visible difference expected to be observed.

With the demand of operational, technical and managerial skills in the industry, a new culture of skill enhancement development would propel a sense of competition that later impacts on business productivity (NPO 2011).

These long term requirements for education, skill development should be for commercial future. The overall strategy should be to match local practices with international best practices and create a benchmark that becomes standard for all in market place (NPO, 2011).

By choosing the right type of training, businesses can make sure that their employees have the right skills for their business, and are kept up-to-date with best and new practices. This is applicable for all employees, right up to the management level. Organizations need to Plan to develop strategies to improve the performance of the organization and must do take further action to improve the performance of the organization. Then constantly review by evaluating the impact on the performance of the organization. What I further suggest is that maintaining momentum after learning new skills and techniques is of the paramount importance if organizations want to maximize the benefits of up skilling employees. Training programs provide its participants about details and make them prepared for their work, so the training leaders need to establish a robust coaching system in order to roll the knowledge around the organization and they also need to ensure the feedback process to facilitate increased learning. Managers also need to ensure and give support of implementing the new ideas that learned during the training. Managers also need to find ways of improving existing business practices and make sure that new standards and way of working become routine as soon as possible.

Training has traditionally been a conventional method utilized to prepare and arm both current and new employees with necessary and relevant knowledge and skills needed to perform day-to-day operational activities that ultimately determine organizational performance, success and competitiveness. Research in strategic human resource management, organizational performance, performance improvement, and organizational competitive advantage has
conceptually and empirically linked training to organizational performance and sustained competitive advantage (Bartel 2003).

Conventional ‘training’ is required to cover essential work-related skills, techniques and knowledge. And much of this section deals with taking a positive progressive approach to this sort of traditional training. Importantly however, the most effective way to develop people is quite different from conventional skills training, which let's face it many employees regard quite negatively. They'll do it of course, but they won't enjoy it much because it's about work, not about themselves as people. The most effective way to develop people is instead to enable learning and personal development, with all that this implies.

So, as soon as businesses covered the basic work related skills training that are much described in this section; they need to focus on enabling learning and development for people as individuals. This extends the range of development way outside traditional work skills and knowledge, and creates far more exciting, liberating, motivational opportunities for people and for employers. Right now organisations are facing great pressure to change these days - to facilitate and encourage whole person development and fulfilment beyond traditional training.

5.2- Analysis of NPOs Productivity Tools

Productivity to Labor Workforce:

Main objective and question is to define the main goal of the productivity movement. It’s always clear that higher productivity will promote business development, improve competitiveness both in domestic and international arena, and realize more profit for the corporation and more foreign exchange earnings for the economy (Ballot 2002). In the contemporary conditions around the globe, the healthy participation and involvement of labor in productivity efforts are considered essential. For this reason, such words as “ownership” and “participation” have become the key words across world. So our productivity pioneers held the strong conviction that with absence of positive labor participation, there is no chance of success in productivity mechanism (Ballot et al. 2002).

The actual productivity model started by looking at work-level productivity, and has then been expanded to include corporate-level or nation-wide industrial productivity in most countries
today (Aghion & Howitt 1998). The new productivity paradigm is to expand the traditional concept further. So as to cover “social productivity” by making it clear that such issues as environmental protection, working conditions, energy issues, social and management systems, social welfare policies, etc (Aghion & Howitt 1998).

**Social and Labor Productivity**

Productivity think tanks are one of the important factors which addresses not only the working and living environment. However it deals with working hours followed, remuneration, coverage under labor protection agenda like social security and EOBI, Facilities like sanitation, drinking water, special facilities for women and young workers, clauses on harassment, compliance to international standards ISO 9001, SA-8000, ISO 14001, OHSAS-18001 and others (KPC 2011). Therefore it is determined that social contract is one of the key component/factor which needs importance as well as due weightage so that firm may work out their performance as well as the efficiency of the labor mechanism.

Productivity tools supplement each other. Especially if we raise the motivation level of the workers by providing conducive and congenial working environment along with better living standards. In that way we can definitely boost the labor productivity of the organization itself (NPO 2011). Some of the most common tools that are the outcome of overall strategy that discussed in the empirical part are analyzed below.

Employee involvement through quality circles approach does not need quality circle members to have in-depth technical knowledge to solve problems rather than it should only have basic understanding of its methodologies. The requirement is simply ideas for improvement and the will to try them (Arellano & Bond 1998). If proposed solutions do not work the QC team can redesign them and implement it again to get improved results. Today quality circle is turning to be innovative circle, where the focus is to implement something new.

The best part of the Green Productivity tool that NPO used in evaluating businesses performance is that it seeks an overall analysis of process of the entire operating unit and reviews resource utilization through each step in terms of the material or energy level.
Today is world of standards. To maintain these standards it’s a huge task on part of firms to keep up with the competing arena (Card 1999). This is where benchmarking takes place. NPO benchmarking practices goes beyond comparison of the pricing or features of competitors’ products or services. In benchmarking, NPO considers not only the result, but also the process and the practices that make a business to achieve something that is better than others performance. NPO process benchmarking invariably engages in a study of how top-performing firms achieve the specific operations that are supposed to be resolved. Such studies convert it to be a research, surveys/interviews, and site visits (Productivitypromotion 2011). Competitive benchmarking offers numerous facilitation for learning and development from the players who are at the leading edge and have potential to progress in a same direction.

Cooperative and collaborative benchmarking approach is the most frequently used in an arena of benchmarking because it is relatively easy to conduct (Productivitypromotion 2011). Benchmarking can become lengthy procedure or as simple as browsing through the annual/yearly reports of company and formation. Any kind of research might or can bring an idea into knowledge of our own level of work and its output (Productivitypromotion 2011). However, one of the most frequent mistakes in this aspect an organization make is to confine their benchmarking operation to their own industry. Benchmarking within an industry is no doubt an important arena. However the external arena of the industries can’t be ignored as well since it offers insights that impacts internal arena as well.

Employee suggestion schemes (ESS) are famous among many companies that are heading for world-class business excellence and efficiency. This employee engagement approach seeks their knowledge for ideas for making things better.

At international arena the standard of Six Sigma stands as major statistical business improvement tool having critical analysis on approaches that leads to defects elimination procedures that impact customer’s satisfaction (NPO 2011). It’s a quality tool that must needs to be incorporated by all the businesses according to NPO and it addresses continuous improvement in adding value to customers and eliminates wastes that is any activity that bears more cost than it should (Blundell et al. 1996).
Kaplan and Norton concept of Balance Scorecard is useful technique used by NPO for improving business performance. Because it talks about the building and maintenance of businesses overall performance in terms of its financials, business processes, growth and customer focus. And these are the main pillars of any business. So if we properly take care the roots of these pillars then the whole tree will definitely generate fruits in the future (Kaplan & Norton 1996).

A key recommendation arising from the deliberations was the need for member countries to evaluate and strengthen their productivity movements constantly to meet the challenges of the rapidly changing competitive environment and increasing societal expectations. The overall extraction of the idea is that labor deeply suffers and depletion in the efficiencies of the productivity and prosperity is visible. However the companies which provide the better living facilities and conditions to the workers will definitely have higher rates of efficient labor productivity.
6. DISCUSSION

Organizations must first assess and conduct some training need analysis. Then they need to identify that what they want to train and develop in people and break down the training or learning requirements in to manageable elements. After doing that they need to look at the employees learning styles that what type of training they will find easiest. Then they must need to evaluate training effectiveness in which they need to include before and after measurements. And good course presentation is important for the delivery of training like how to run meetings and workshops to train employees effectively that in turn improve business performance.

Training is essential for the organisation. It helps improve quality, customer satisfaction, productivity, morale, management succession, business development and profitability. There are many different training and development methods. That includes On-the-job training, informal training, classroom training, internal training courses, external training courses, on-the-job coaching, life-coaching, mentoring, training assignments and tasks, skills training, product training, technical training, behavioral development training, attitudinal training and development, accredited training and learning and distance learning. All these training are part of the training menu that are available to use and apply according to the individual and organizational training needs.

6.1. Identification of Issues

- One of the few major dilemmas in my country is that the management shows preference and importance to the middle and top management for providing good housing, transportation and health facilities. Though the workers who are always unaddressed are the ones which are the back bone of the organization.

- The management of the firm within any industry do not facilitate shop floor worker though their involvement and participation is higher than the middle management.

- It was also identified in the textile sector that the management focuses in building and organizing state of the art administration blocks. However along with that the
workers are not even facilitated with proper ventilation arrangements which results workers poor moral and high effect on the labor & managers productivity.

- The crux of the study is that there is a strong binding and linkage between the living conditions and labor productivity.

- The opposite sides of the same coin are usually known as the productivity and quality. The term productivity is a terminology understood easily and comprehended by the management in any organization, but the workforce and customers understand the quality more easily. It is impossible to attain one without the other. In almost all the business ideal structure focus on roots in productivity of their own, but the quality being their ratio of production in a form of output. Quality requires being more analyzed and defined at micro level and thus has to be dealt differently based on the business operations and its nature (Aghion & Howitt 1998). The final feedback on the quality is given by the end user itself and then organization’s action plan on productivity takes place.

- While by reviewing various business ideal models from the perspective of people, without the constant engagement of the workforce and stakeholders in the enterprise the drive to achieve profitability cannot provide expected results. Almost in the entire top management arena they educate that the leadership and customer focus are the two vital components in progressing firm. According to the business best practices the structure is to focus on the “push” and “pull,” respectively, of productivity (Booth et al. 1999). Throughout the organization a strong sense of shared vision, created a manifest on daily basis particularly by management at all levels.

6.2. Impact of Well Planned on the Job Training

Firms along with skills also focuses on other aspects like innovation, creativity and service which serves as an essential step in facilitating firms to create value in the economy which is new (Acemoglu & Angrist 2000). It’s a fact that almost all the firms acknowledge that training serves as a vital exercise that has tendency to produce better results and also leading to a culture
of learning (Bartel 1995; Blanchflower & Lynch 1992; Boon & van der Eijken 1997; Booth 1991) and many firms still fail to deliver the desired training needed for their manpower.

- Skilled manpower shortage and busy work routine. (Acemoglu & Pischke 2003).
- Reluctance of the manpower for attending the training during busy and engaged hours (Bartel 1995).
- Work benchmarking in courses are not exactly affiliated to the practicing firms (Boon & van der Eijken 1997).
- No training providers are available for the specific skills required (Booth 1993).

As per the findings specified above, the need of the hour is to give due value and significance to the training programs for the vital human capital at corporations as the portfolio is enriched by this. At the same point, both private sector organizations and public sector work concurrently to get better by the living surroundings. And operational conditions of the labor result in greater labor productivity of the organizations respectively.
7. CONCLUSION

This paper offers empirical investigation of business performance by using training and productivity tools. Based on my analysis, it becomes clear that each productivity unit within Pakistan contributes to national GDP. By using different quality productivity tools after a deliberate audit NPO with its experts opinion provides effective solutions that not only makes things systematic but also reduces costs. By using the data it’s allowed me to estimate the impact of training on private and public sector.

The research material made it possible to analyze the robustness of the results by considering desegregation by occupation and a mechanism that measures duration of training. So Building and maintaining good quality employees will help businesses to become independent and self-sufficient in work and life. And this is because employees who are trained tend to be well-developed individuals who are knowledgeable, skilled, up-to-date with answers to other people's questions. They are capable of teaching, training, mentoring and leading others and also capable of enabling and assisting change in groups and organisations by using useful tools and materials. They are able to convey to others the advantages of seeking and finding answers and solutions that will automatically increase business performance.

Training help answer questions, which is one of the essential needs of life and work. Training is generally required for improvement in anything whether a small improvement or the development and launch of the mightiest corporation. If businesses build effective training mechanism than naturally their employees become more effective that in turn will increase their business performance.

Through experience I am witnessing a drastic change in production units and business performance that was made possible due to effective training, development techniques and productivity tools. Therefore, it is found that training has a positive and clear effect on Business performance and productivity.

7.1. Further Scope of Research on the Training

Executives and top management teams need to integrate training and involve training professionals in every business strategy. For the future research, this study can be replicated
using a sample drawn from a different population. For example, a sample of CEOs can be drawn to study their perception of the impact of training and its integration in the firm’s business strategies on the firm’s competitiveness.

Another direction for future research is to examine the moderating and/or mediating effects of the integration of training in the firm’s business strategies on the measures of the firm’s innovation using quantitative data and more advanced statistical procedures. A study can be designed to compare financial measures of the firm’s performance in respect to the level of integration of training in the firm’s business strategies. Finally, it may be interesting to compare the perceived impact of training and its integration of the firm’s business strategies on the firm’s competitiveness among publicly traded and private firms.

Every organization must inculcate on the job training mechanism that is likely to give major difference in skill development. Further research will have to explicitly address the simultaneous and complex nature of the linkage between training decisions and economic performance.

This study can be done in the future by replicating the research method by choosing quantitative method. Quantitative research can be done via mathematical, statistical and computational techniques and the objective is to develop models and hypothesis pertaining to the specific study. So if I will be working in the National Productivity Organization in the future, I can do the same subject thesis by developing the new case study that will be conducted in some other sector. By having the data from four to five companies of that particular sector. The analyses will be done by first analyzing their current problems by giving the scores to each highlighted problem in each company, then hypothesis will be developed. Then I will plan the solutions by hiring some experts who are technical masters in those problems solving areas and launch some training sessions to give training for the application of solving those problematic issues. And then wait and watch improvements within two years after giving training to the employees to saw the results to check on the hypothesis. And if the solutions work out then those results will be standardized for the future in that specific sector.

How I can be benefited via doing this thesis in my future professional career. The answer to this question is that if I will be hired as a quality management officer, so I will be in a better position to serve the business in a way that I will utilize that knowledge through implementing fruitful
solutions to the problems that organization will experience via this thesis. This thesis will serve as a guiding tool to analyze and solve the quality related problems of a business in a much better manner. And this thesis can be utilized as a referencing or guiding tool and benchmark for students who want to work on the following areas. Those areas include business quality management, business trainings, and management issues under several departments like business administration, computer sciences, engineering etc. This is possible because training and quality management practices requires for the development of any industry and sector in the whole business world.

This thesis can also be developed further if someone hires me in the management related position in any Multinational company who maybe new in my country and having cultural diverse employees from all over the world. Because the purpose of that multinational company is to grasp the best talent from all over the world to incorporate learning. So I will be developed this thesis further by taking the sample of my colleagues in that company. For Example I will collect primary data by taking Interviews and filling questionnaires from twenty people across twenty different countries with different perspectives. Questionnaires and interview will be designed via including questions of training and productivity tools importance to enhance business performance in their home countries. And after that I will jot down the important factors that identified in the interviews and questionnaires and give scores to those factors like this factor is rated high or low in those countries. So by doing that, the end results will show much more dynamic results because it collaborates and combines data from twenty different cultural perspectives. Moreover, it will also give the broader view concerning to the topic that will be much industrious to relied upon.

The research on the same topic can also be done by developing the case study. This can be done via having information from the departmental heads of Karlstad University in different departments. Interview and questionnaires can be used as primary tools for collection of the data. Questions such as what kind of problems they usually come across in their particular departments? or how did they solve it?. Did they conduct any training, meetings, seminars and workshops for the faculty members and the management staff? Did they proof beneficial or what are the regular means of learning techniques? And how they guide to their new employees at any management related position that sharpens towards the performance of the University? So that
rich information can be compiled in the form of thesis step by step. Like first giving introduction to the topic, then working on the methodology, and in theoretical framework one can write general but related theories on the important works that was done previously by different researchers and authors in to the same area by incorporating one’s own view. In Empirical part Karlstad University and its training programs and productivity and service enhancement works can be included. In Analysis the dialect and relationship between theories and empirical phenomena can be discussed by including the findings from the developed case. In discussion some issues can be discussed and in conclusion one can finally extract the results that came from the conducted study that is approached towards finding the purpose of the problem.

7.2. Recommendations

- Strong vision only has a true meaning when it is integrated with people who are determined to reveal solutions for unanswered questions and make it happen.
- The top management of the organization must provide congenial and favorable environment to the workers at lower level as they are the main back bone of the industrial growth.
- The concerns related to the workers for extending the facilitation in terms of transportation, housing, sanitations, health, educational and recreational activities must be openly said in a lecture by the top management in the organization.
- It is obvious throughout this study that the organizations which are concentrating and giving due weightage to the living conditions are prospering. However the companies not focusing on humanizing the living conditions are certainly not completing the desired institutional targets. The importance of working and living conditions for the labor must be understood by the high-ups and should shift their main concerns from state of the art administrative blocks and layouts to a betterment of the employees.
- Apart from this, the management has to have the implementation of various standards like Social Accountability 8000 or Corporate Social Responsibilities or ISO26000, OHSAS 18000 and ISO14000EMS. So that overall performance productivity and labor productivity can be made better.
- With the critical analysis of gap between goals and current performance, breakthrough is possible even if they might be very difficult to achieve.
• Team-mechanism of work to cultivate trust through active participation.
• A trend of committed performance by everyone in organization who deals with customers.
• Some things are required to be understood by the management in the firm by their own. That includes voice of worker/employee and provides appropriate living conditions, incentives as well as working conditions for superior productivity.
• Measuring the business performance in a meaningful manner so as to gauge improvement.
• And open communications that is based on honesty and clarity.
REFERENCES


Wright, C., Knight, R., & Speed, J. (2001, April 17). The £50 a week investment that grows profits twice as quickly. Learning and Skills Council, 8.


**Electronic Links**

(NPO 2011), *Functionalities of Pakistan’s National Productivity and its contribution to national productivity.* [Online]. Available:  

*Functionalities of Singapore’s National Productivity and its contribution to national productivity.* [Online]. Available:  

(Productivitypromotion, 2011) *Effect of advance Training tools and methodologies.* [Online]. Available:  
http://www.productivitypromotion.tejoswebhost.com/[2011-03-10]

Managing organizational efficiencies [Online]. Available:  


*Efficiency and Effectiveness = Productivity* by Willie Maartens


Increase Workplace Efficiency and Productivity with Effective Business Tools by Paul Buchanan [Online]. Available:


Productivity, Efficiency, Effectiveness and Focus by David Bohl [Online]. Available:


Productivity = Effectiveness + Efficiency by Donald Latumahina [Online]. Available:


Difference Between efficiency and effectiveness by Bindya [Online]. Available:


Interview

Interview with Mr Iftikhar Ali, Senior Quality Manager at National Productivity Organization-Head Office Islamabad on 25th June 2011.
Appendix

Data construction for industry panel

The database that is constructed combines several sources. The critical individual level source is NPO and APO website. This appendix provides further details on the composition and structure of the data set analyzed in this paper. Table in case study describes the composition of the sample by year, size, industry and geographic region. The textile industry sector accounts for 48.6 per cent of the sample, followed by business services (14.2 per cent) and trade (11.1 per cent). The bulk of economic activity is located in the northern regions, that together account for almost 70 per cent of the firms in the sample. The under-representation of small firms should not be a cause of major concern when considering firms' training decisions. The overall purpose is to lay down the impacts of training through various tools on organizational and national productivity. The dimensions of research were defined at few aspects:-

• The extent and types of training undertaken by employees in the survey;

• Personal characteristics of interviewees (e.g. age, sex, region);

• The skills of individuals (educational qualifications and occupation);

• Some basic workplace characteristics (e.g. employer size, industry);

• Job characteristics of employees (e.g. job tenure, hours of work).

I work with this information aggregated into proportions and/or averages. My sample includes all employed men and women aged between 16 and 64 inclusive (i.e. employees plus the self-employed) for whom there was information on the industry under which their employment was classified. The main training question asked to employees in the Labor Force Survey was ‘over the 4 weeks in which they were taken part in any education or training connected with your job, or a job that you might be able to do in the future?’. The data shows average proportions of undertaking training in each year.
Explanation of Figures

Figure 1 is the figure of the quality circle activities for continuous improvement. It is based on the plan do check act approach to solve problematic issues. Quality circles team identify the problem then they plan the ideas to solve the problems. After that, they do it and launch the solution by implementing it. Then teams thoroughly check that either the proposed solution work or not. Then they act accordingly regarding the situation. Like if the solution works they standardized it. Otherwise teams continuously work upon for further improvement.

Figure 2 is the detailed explanation of the Plan do check act approach. Like in plan phase team select the theme to work upon. Then they plan the work schedule to understand present situation and set the target for the analysis of the problem. Then they implement the solution in the do phase and evaluate the results in the check phase. And if the solution works for the benefit of the business then they standardized it. Otherwise cycle carries on and on and on.

Figure 3 is the figure of the green productivity cycle and clearly shows all the steps in the process. It starts with the input that includes man, machines, materials and capital. Then these inputs are being processed in the methodology phase. Then they give outputs in the form of the products and services, operational wastes etc and productivity is maintained or improved during the whole process. The cycle’s main purpose is to achieve total quality management at the workplace.

Figure 4 is the explanation of the benchmarking process. It has three phases planning, analysis and implementation. Figure clearly shows the step by step loops throught arrows. Its basically the process that is used to improve performance of a product or service. It also suggests where changes need to be made.

Figure 5 shows the employee suggestion schemes through two ways communication between the business’s management and its employees. Employees give ideas for improvement to management that satisfy the businesses corporate objectives. In turn management recognize those ideas and reward employees whose ideas and suggestion are of the high impact.

Figure 6 shows the detailed explanation of the process flow of the operation of the employee suggestion scheme through flow chart.
Figure 7 shows the steps in the six sigma DMAIC methodology that is define, measure, analyse, improve and control. It starts with the define phase to understand that which process needs to be improved and they set the goal. Then business measures the current status of the problem. After that they analyse by developing cause and effect theories of the problem to search for the root of the problem. In improvement phase they develop and implement the solution of the problem and sustain the improvement in the control phase.

Figure 8 shows the explanation of the generic balance scorecard technique explained by Kaplan and Norton. Business vision and strategy of the company is incorporated through its internal business process, learning and growth objectives, customers and financials.

Figure 9 shows the list of national productivity organizations that are working across several Asian countries.

Figure 10 shows the total factor productivity trend of Pakistan in comparison with other 3 Asian countries.

Figure 11 is the figure of the benchmarking ratings. It contains the benchmarking value, quartile and description. Like the companies who receive the benchmarking value of 9 and 10 in first quartile are considered as world class companies and so on.

Figure 12 shows the benchmarking steps. It starts with the question of what to benchmark, then business plan the benchmarking project and analyse the current business practices that they are trying to transform in to new ones. Then business collect data regarding the processes that needs to be benchmarked. After that they analyse information to adopt the best practices. And the final stage is the implementation of the results.

Figure 13 till 16 shows the benchmarking scores of sewing and industrial engineering, machine maintenance, dyeing fishing laundry and knitting.

Figure 17 shows the operational observations across factories in terms of several factors. Factors included are technological strength, work method, maintenance, timeline, product development quality, workers condition, housekeeping, presence of analytical culture and training.
Figure 18 shows the poor practices of textile mills and some before and after measurements. Poor practices includes the poor housekeeping, rework and line balancing, cutting housekeeping issues, compliance and safety issues, over crowdedness, lighting and housekeeping issues, poor fabric handling.

Figure 19 shows the table of expected improvements after launching certain improvement parameters in terms of certain key performance indicators. Score points are given against each key performance indicator. Expected scores after every three years are also been given in the table. So in the end it shows the cumulative improvement in each table.